

**Energy Efficiency
In
Iowa's Electric and Natural Gas Sectors**

**Materials Submitted
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To the Iowa General Assembly
To Supplement
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IOWA UTILITIES BOARD

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PART V. IOWA UTILITIES' APPROVED ENERGY EFFICIENCY PLANS FOR 2009-2013

In January 2009 the Iowa Utilities Board delivered to the General Assembly the first four parts of a five-part report about energy efficiency programs operated by Iowa's three largest investor-owned utilities – MidAmerican Energy Company (MidAmerican), Interstate Power and Light Company (IPL) and Black Hills Corporation. At that time, the IUB was considering energy efficiency plans for 2009-2013 that had been proposed by the IOUs. During 2009 the IUB approved modified versions of those plans, so the IUB now is in position to present Part V of the report.

In 2009 utilities planned to spend a total of \$100 million for electric energy efficiency (EE) and load management (LM) programs, up from \$82 million in 2008. The utilities expect their electric EE and LM spending will increase steadily throughout the five years of the plan, with single-year spending reaching \$133 million by 2013. (See Tables V-1 and V-2.)

Of utilities' spending for electric EE and LM, about two-thirds will go for non-residential programs and one-third for residential programs throughout the five years. (See Table V-1).

MidAmerican expects that the electricity saved by its EE and LM initiatives will equal 1.1% of its retail electric sales in 2009 and will rise to 1.5% in 2010. IPL expects its electricity savings from EE and LM initiatives will amount to 0.9% of retail electric sales in 2009 and will rise to 1.3% by 2013. (See Tables V-3 and V-4.)

In 2009 utilities planned to spend a total of \$36 million for natural gas energy efficiency programs, up from \$30 million in 2008. The utilities project that their natural gas EE spending will reach \$49 million by 2013. (See Tables V-1 and V-2.)

Of utilities' spending for natural gas EE, about three-fourths will go for residential programs and about one-fourth for non-residential programs. (See Table V-1).

IPL expects that the natural gas saved by its initiatives will equal 0.90% of its retail natural gas sales in 2009, Black Hills projects natural gas savings of 0.82% of retail sales in 2009, and MidAmerican projects natural gas savings of 0.64% in 2009. (See Tables V-5 and V-6.)

See Tables V-7 through V-17 for analyses of spending and results for electric energy efficiency, natural gas energy efficiency and load management programs in the 2003-2008 period. Those tables supersede Tables II-1 through II-11 that appeared in the IUB report submitted to the General Assembly in January 2009.

Table V-1
Iowa Investor-Owned Utilities
Planned Spending
For Energy Efficiency and Load Management Programs
2009-2013

(Amounts in \$000s)	2009	2010	2011	2012	2013
Electric	\$99,529	\$111,223	\$117,314	\$126,829	\$132,735
Residential	\$31,980	\$35,529	\$39,346	\$41,352	\$43,449
Energy Efficiency	\$24,683	\$27,894	\$31,072	\$32,910	\$34,917
Load Management	\$7,297	\$7,635	\$8,274	\$8,442	\$8,532
Non-Residential	\$67,549	\$75,694	\$77,968	\$85,477	\$89,286
Energy Efficiency	\$34,021	\$41,060	\$42,850	\$49,819	\$53,238
Load Management	\$33,528	\$34,634	\$35,118	\$35,658	\$36,048
Natural Gas	\$36,048	\$40,476	\$42,985	\$46,773	\$49,216
Residential EE	\$28,980	\$31,356	\$33,371	\$35,801	\$37,743
Non-Residential EE	\$7,068	\$9,120	\$9,614	\$10,972	\$11,473
Total	\$135,577	\$151,699	\$160,299	\$173,602	\$181,951

Note: Iowa has three investor-owned utilities: 1) MidAmerican Energy Company (electric and natural gas); 2) Interstate Power & Light Company (electric & natural gas); and 3) Black Hills Energy (natural gas).

Source: Utilities' energy efficiency plans and settlements approved by the Iowa Utilities Board.

Table V-2
Iowa Investor-Owned Utilities
Planned Spending
For Energy Efficiency and Load Management Programs
By Utility
2009-2013

(Amounts in \$000s)	2009	2010	2011	2012	2013
Electric	\$99,529	\$111,223	\$117,314	\$126,829	\$132,735
MidAmerican	\$39,550	\$46,638	\$49,320	\$53,251	\$54,653
Energy Efficiency	\$26,056	\$32,738	\$34,871	\$38,672	\$40,178
Load Management	\$13,494	\$13,900	\$14,449	\$14,579	\$14,475
IPL	\$59,979	\$64,585	\$67,994	\$73,578	\$78,082
Energy Efficiency	\$32,648	\$36,216	\$39,051	\$44,057	\$47,977
Load Management	\$27,331	\$28,369	\$28,943	\$29,521	\$30,105
Natural Gas	\$36,048	\$40,476	\$42,985	\$46,773	\$49,216
MidAmerican	\$18,982	\$22,197	\$23,425	\$25,506	\$26,405
IPL	\$11,241	\$12,238	\$13,306	\$14,791	\$16,125
Black Hills	\$5,825	\$6,041	\$6,254	\$6,476	\$6,686
Total	\$135,577	\$151,699	\$160,299	\$173,602	\$181,951

Source: Utilities' energy efficiency plans and settlements approved by the Iowa Utilities Board.

Table V-3
Iowa Investor-Owned Utilities
Projected Megawatt Hours To Be Saved in a Year
As a Result of Energy Efficiency
And Load Management Measures Initiated in That Year
(Incremental Savings)
2009-2013

(Amounts in megawatt hours)	2009	2010	2011	2012	2013
MidAmerican	200,252	286,091	306,540	308,621	312,494
IPL	134,000	147,000	154,000	198,000	207,000
Total	334,252	433,091	460,540	506,621	519,494

Source: Utilities' energy efficiency plans and settlements approved by the Iowa Utilities Board.

Table V-4
Iowa Investor-Owned Utilities
Projected Incremental Megawatt Hours To Be Saved
By Energy Efficiency and Load Management
As a Percentage of Utilities' Retail MWh Sales
2009-2013

	2009	2010	2011	2012	2013
MidAmerican	1.09%	1.50%	1.54%	1.51%	1.50%
IPL	0.90%	0.90%	1.00%	1.20%	1.30%

Source: Utilities' energy efficiency plans and settlements approved by the Iowa Utilities Board.

Table V-5
Iowa Investor-Owned Utilities
Projected Decatherms of Natural Gas To Be Saved in a Year
As a Result of Energy Efficiency Measures Initiated in That Year
(Incremental Savings)
2009-2013

(Amounts in decatherms)	2009	2010	2011	2012	2013
MidAmerican	396,141	474,276	497,134	525,147	535,310
IPL	269,647	288,216	305,224	326,301	347,472
Black Hills	139,209	144,024	148,951	152,704	156,091
Total	804,997	906,516	951,309	1,004,152	1,038,873

Source: Utilities' energy efficiency plans and settlements approved by the Iowa Utilities Board.

Table V-6
Iowa Investor-Owned Utilities
Projected Incremental Decatherms To Be Saved
By Energy Efficiency
As a Percentage of Utilities' Retail MCF Sales
2009-2013

	2009	2010	2011	2012	2013
MidAmerican	0.64%	0.76%	0.79%	0.84%	0.85%
IPL	0.90%	1.00%	1.10%	1.10%	1.20%
Black Hills	0.82%	0.86%	0.89%	0.92%	0.94%

Source: Utilities' energy efficiency plans and settlements approved by the Iowa Utilities Board.

Table V-7
Iowa Investor-Owned Utilities
Spending on Energy Efficiency and Load Management Programs
2003-2008

	2003	2004	2005	2006	2007	2008
Electric	\$46,578,055	\$66,527,777	\$70,992,471	\$75,446,606	\$77,989,135	\$81,772,975
Residential	\$16,380,837	\$18,305,222	\$19,231,656	\$21,037,971	\$22,335,791	\$23,423,786
Energy Efficiency	\$11,842,387	\$13,092,323	\$14,205,512	\$15,860,671	\$16,360,891	\$17,095,682
Load Management	\$4,538,450	\$5,212,899	\$5,008,145	\$5,177,300	\$5,974,900	\$6,328,104
Non-Residential	\$26,604,529	\$45,395,011	\$48,936,279	\$51,354,235	\$51,982,900	\$54,461,212
Energy Efficiency	\$13,036,953	\$16,787,091	\$17,879,026	\$21,268,537	\$21,349,815	\$22,778,861
Load Management	\$13,567,576	\$28,607,920	\$31,057,253	\$30,085,698	\$30,633,085	\$31,682,351
Other	\$3,592,689	\$2,827,544	\$2,842,536	\$3,054,401	\$3,670,444	\$3,887,977
Natural Gas	\$22,236,361	\$22,687,726	\$28,298,984	\$31,065,272	\$28,432,982	\$29,806,006
Residential EE	\$18,187,264	\$19,080,789	\$23,719,125	\$25,807,875	\$22,228,600	\$22,745,012
Non-Residential EE	\$2,176,691	\$2,222,615	\$3,182,192	\$3,648,270	\$4,335,062	\$4,489,363
Other	\$1,872,406	\$1,384,322	\$1,397,667	\$1,609,127	\$1,869,320	\$2,571,632
Total	\$68,814,416	\$89,215,502	\$99,291,455	\$106,511,878	\$106,422,117	\$111,578,981

Notes: 1) Amounts are expressed in nominal dollars; 2) Rows and columns may not sum because of independent rounding; and 3) The major increase in spending between 2003 and 2004 resulted primarily from IPL's having shifted the cost recovery mechanism for its non-residential load management program.

Source: Utilities' reports submitted to the Iowa Utilities Board.

Table V-8
Iowa Investor-Owned Utilities
Spending on Energy Efficiency and Load Management Programs
As a Percentage of Utilities' Retail Sales Revenue
2003-2008

	2003	2004	2005	2006	2007	2008
Electric	2.52%	3.49%	3.37%	3.36%	3.49%	3.67%
Natural Gas	2.29%	2.27%	2.31%	2.80%	2.30%	2.22%

Source: Iowa Utilities Board staff calculations, based on data that utilities provided in reports to the IUB.

Table V-9
Iowa Investor-Owned Utilities
Megawatt Hours Saved in a Year
As a Result of Energy Efficiency and Load Management Measures
Initiated in That Year
(Incremental Savings)

	2003	2004	2005	2006	2007	2008
Residential	27,760	33,424	62,771	63,992	64,224	64,867
Energy Efficiency	27,727	33,398	60,072	65,532	63,272	64,619
Load Management	33	26	2,699	-1,540	952	248
Non-Residential	134,521	164,636	161,992	209,976	219,703	227,335
Energy Efficiency	133,791	164,636	157,681	209,443	218,625	227,335
Load Management	730	0	4,311	533	1,078	0
Total	162,281	198,059	224,763	273,968	283,927	292,201

Note: Rows and columns may not sum because of independent rounding.

Source: Utilities' reports submitted to the Iowa Utilities Board.

Table V-10
Iowa Investor-Owned Utilities
Incremental Megawatt Hours Saved
By Energy Efficiency and Load Management
As a Percentage of Utilities' Retail MWh Sales

	2003	2004	2005	2006	2007	2008
Residential	0.33%	0.40%	0.70%	0.72%	0.69%	0.70%
Non-Residential	0.60%	0.74%	0.71%	0.88%	0.89%	0.92%
Total	0.53%	0.65%	0.70%	0.84%	0.84%	0.86%

Source: Iowa Utilities Board staff calculations, based on data that utilities provided in reports to the IUB.

Table V-11
Iowa Investor-Owned Utilities
Megawatt Hours Saved in a Year
As a Result of Energy Efficiency Measures
Initiated in That Year and All Previous Years
(Cumulative Savings)

	2003	2004	2005	2006	2007	2008
Residential	190,768	224,192	286,962	350,954	415,178	480,045
Energy Efficiency	187,731	221,129	281,200	346,733	410,004	474,623
Load Management	3,037	3,063	5,762	4,222	5,174	5,422
Non-Residential	1,028,482	1,193,118	1,355,110	1,565,086	1,784,789	2,012,124
Energy Efficiency	1,002,890	1,167,526	1,325,206	1,534,649	1,753,275	1,980,609
Load Management	3,558	3,558	7,870	8,403	9,481	9,481
Other	22,034	22,034	22,034	22,034	22,034	22,034
Total	1,219,250	1,417,309	1,642,072	1,916,040	2,199,967	2,492,168

Note: Rows and columns may not sum because of independent rounding.

Source: Utilities' reports submitted to the Iowa Utilities Board.

Table V-12
Iowa Investor-Owned Utilities
Peak Megawatts Saved in a Year
As a Result of Energy Efficiency and Load Management Measures
Initiated in That Year
(Incremental Savings)

	2003	2004	2005	2006	2007	2008
Residential	17	26	0	26	26	28
Energy Efficiency	14	18	28	25	24	24
Load Management	3	8	-28	1	2	4
Non-Residential	35	116	-16	10	37	56
Energy Efficiency	28	34	38	40	38	40
Load Management	7	82	-54	-30	-1	16
Total	52	143	-16	36	63	84

Note: Rows and columns may not sum because of independent rounding.

Source: Utilities' reports submitted to the Iowa Utilities Board.

Table V-13
Iowa Investor-Owned Utilities
Peak Megawatts Saved in a Year
As a Result of Energy Efficiency and Load Management Measures
Initiated in That Year and All Previous Years
(Cumulative Savings)

	2003	2004	2005	2006	2007	2008
Residential	194	221	221	248	274	301
Energy Efficiency	104	122	150	175	199	223
Load Management	90	99	71	73	75	78
Non-Residential	631	747	731	742	779	834
Energy Efficiency	203	237	275	315	353	392
Load Management	428	510	456	427	426	442
Total	825	969	953	989	1,052	1,135

Note: Rows and columns may not sum because of independent rounding.

Source: Utilities' reports submitted to the Iowa Utilities Board.

Table V-14
Iowa Investor-Owned Utilities
Thousands of Cubic Feet of Natural Gas Saved in a Year
As a Result of Energy Efficiency Measures
Initiated in That Year
(Incremental Savings)

	2003	2004	2005	2006	2007	2008
Residential	473,365	529,792	661,301	692,112	592,431	594,847
Non-Residential	146,836	131,092	210,841	175,719	213,587	191,818
Total	620,201	660,884	872,142	867,831	806,018	786,665

Note: Rows and columns may not sum because of independent rounding.

Source: Utilities' reports submitted to the Iowa Utilities Board.

Table V-15
Iowa Investor-Owned Utilities
Incremental MCF of Natural Gas Saved
By Energy Efficiency and Load Management
As a Percentage of Utilities' Retail MCF Sales

	2003	2004	2005	2006	2007	2008
Residential	0.67%	0.81%	1.04%	1.18%	0.91%	0.83%
Non-Residential	0.35%	0.33%	0.52%	0.46%	0.41%	0.38%
Total	0.55%	0.63%	0.83%	0.89%	0.68%	0.64%

Source: Iowa Utilities Board staff calculations, based on data that utilities provided in reports to the IUB.

Table V-16
Iowa Investor-Owned Utilities
Thousand Cubic Feet of Natural Gas Saved in a Year
As a Result of Energy Efficiency Measures
Initiated in That Year and All Previous Years
(Cumulative Savings)

	2003	2004	2005	2006	2007	2008
Residential	4,570,368	5,100,161	5,761,461	6,453,573	7,046,004	7,643,012
Non-Residential	975,418	1,106,510	1,317,352	1,493,071	1,706,658	1,900,636
Total	5,545,786	6,206,671	7,078,813	7,946,644	8,752,662	9,543,648

Note: Rows and columns may not sum because of independent rounding.

Source: Utilities' reports submitted to the Iowa Utilities Board.

Table V-17
Iowa Investor-Owned Utilities
Benefits and Costs
Of All Energy Efficiency Measures
(Using the Societal Test)

	2004	2005	2006	2007	2008
Benefits	\$206,456,197	\$244,332,182	\$298,001,414	\$300,415,810	\$312,617,117
Costs	\$113,947,626	\$118,313,410	\$146,629,198	\$139,789,413	\$141,905,765
Net Benefits	\$92,508,571	\$126,018,773	\$151,372,216	\$160,626,397	\$170,711,352
Benefit/Cost Ratio	1.81	2.07	2.03	2.15	2.20

Notes: 1) Dollar amounts are expressed in present-value dollars; and 2) This table excludes load management measures.

Source: Utilities' reports submitted to the Iowa Utilities Board.